

### REMARKS

We have amended independent claim1 to recite that the system for determining the position, orientation and system gain factor of a probe comprises a processor, configured to receive and iteratively process unique measured magnetic field values, for determining a system gain factor indicative of the gain of the probe and a plurality of location factors indicative of the position and orientation of the probe, wherein the iterative process is configured to determine a function of the differences between the measured magnetic field values and a plurality of predicted magnetic field values. We have also added claims 2 – 22. No new subject matter has been added.

### Prior Art Rejections

Claim1 was rejected as unpatentable over Lockhart (U.S. Patent No. 6,226,547) in view of Shapiro (U.S. Patent No. 5,645,065). The Examiner acknowledges that:

“Lockhart et al. do not disclose a probe whose gain (amplitude), position and orientation affects the unique measured magnetic field values corresponding to determine a system gain factor indicative of the gain of the probe and a plurality of location factors indicative of the position and orientation of the probe”.

However, the Examiner believes Shapiro discloses the feature (i.e. the probe) found to be lacking in Lockhart.

We submit that neither Lockhart nor Shapiro, whether separately or in combination, disclose or suggest a system for determining the position, orientation and system gain factor of a probe comprising a processor, configured to receive and iteratively process unique measured magnetic field values, for determining a system gain factor indicative of the gain of said probe and a plurality of location factors indicative of the position and orientation of said probe, wherein said iterative process is configured to determine a function of the differences between said measured magnetic field values and a plurality of predicted magnetic field values, as recited in amended claim 1.

Rather, Lockhart discloses, a method for calculating catheter positional coordinates, in a single step, using a system of N equations that are not solved repeatedly to render iterated approximations of the positional coordinates, as is required by claim 1. Lockhart states at column 5, lines 20 – 25:

“At any particular catheter position, the de-multiplexed sensor measurements of the N source field will be time-independent so Equation 1 can be rewritten as:

$$\mathbf{x}_n = k\mathbf{B}_n(\mathbf{r}_s) \cdot \mathbf{P}_s \text{ for } n=1 \text{ to } N \quad (\text{Equation 2})$$

It is important to note that in Equation 2, N is the number of sensor measurements (see Col. 5, lines 20-21) not an iteration factor. Therefore, Equation 2 provides a system of N equations corresponding to N number of sensor measurements. Furthermore, we note that Lockhart's approach for calculating positional coordinates does not determine a function of the differences between the measured magnetic field values and a plurality of predicted magnetic field values, as required by claim 1.

For at least the foregoing reasons, claim 1 is believed to be patentable over the art.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicant respectfully submits that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

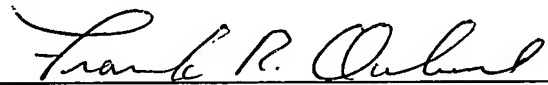
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Enclosed is a check in the amount of \$18.00 for excess claim fees. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney Docket Number 07508-046002.

Respectfully submitted,

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